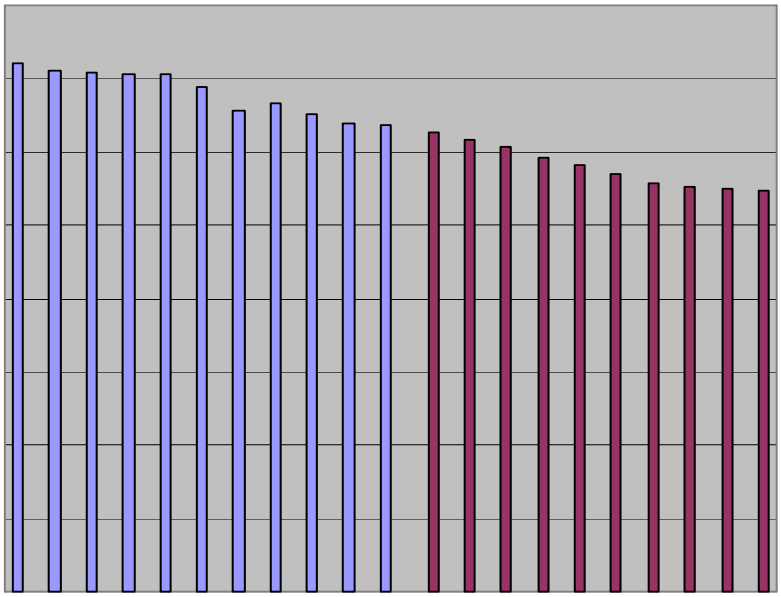
MANSFIELD PUBLIC SCHOOLS ENROLLMENT PROJECTION UPDATED TO 2019



Peter M. Prowda, PhD
80 County Rd
Simsbury, CT 06070
(860) 658-9919
peteprowda@yahoo.com

November 12, 2009

Table of Contents

Introduction

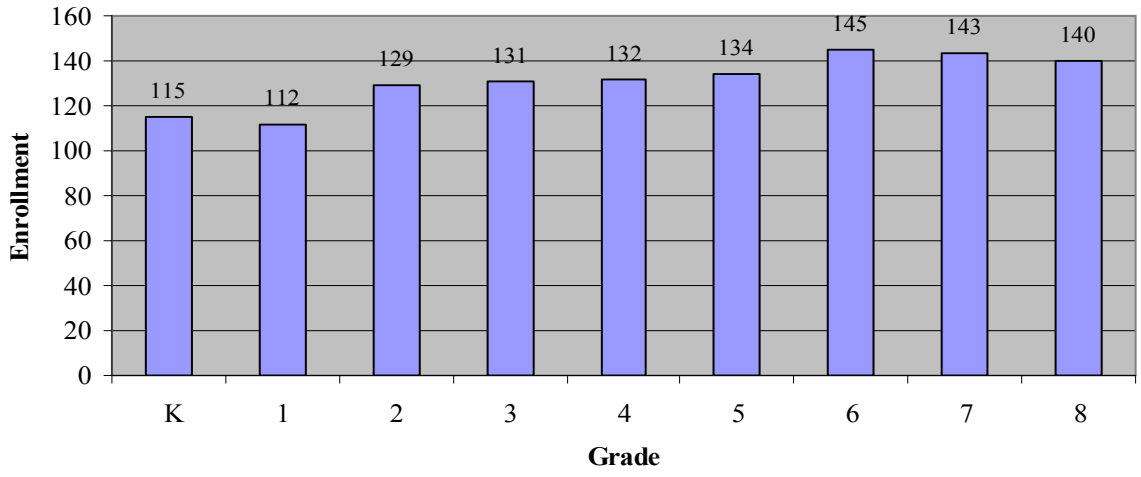
This report is an updated ten-year projection of enrollment for the Mansfield Public Schools. It is based on students attending the Mansfield public schools in October of the school year. The projection is divided into the two grade levels that represent how the Mansfield schools are organized: PK-4 and 5-8. It extends last year's projection from October 2018 to 2019. The report adds a new estimate of 2008 births and revises the calculation of births from 2009 to 2014. Projections of future births have been modified based on the updated information. The report examines births and their relationship to kindergarten enrollment. Data on delayed entry into kindergarten (parent hold-outs) and retentions are provided. The report examines in detail how the 2008 projection performed. Updated data on new housing construction, estimated sales of existing housing and migration are presented and compared to the assumptions used in the 2008 projection. Finally, the accuracy of earlier projections is examined.

An enrollment projection is a valuable planning tool. For budgeting, the numbers can place requested expenditures into a per pupil context. This can inform the public about which expenditures represent continuing expenditures to support on-going programs and expenditures for school improvement and program expansion. In these difficult financial times, it might point out areas for possible cuts. Projections are an essential step in determining the staffing that will be needed in the future. This may facilitate the transfer of teachers from one grade to another or allow the hiring process to start earlier, which can increase the likelihood of attracting the best teachers in the marketplace. Projections are a critical and required step in planning for school facilities. The State of Connecticut requires eight-year projections as a critical component of determining the size of the project for which reimbursement is eligible. In some communities the projection can determine the number of places they can make available to urban students as part of a regional desegregation effort.

Current Enrollment

The staring point for any projection is the current year distribution of students through the grades. Figure 1 presents the 2009 enrollment by grade for grades K-8. Grade 6 had the largest enrollment with 145 students followed by the 143 students in Grade 7. Enrollment will decline as these two classes exit. The smallest class was Grade 1 with 112 students followed by Kindergarten with 115. If current conditions prevail, then this year's kindergarten class of 115 children will have 115 students when it enters middle school in 2013. This graph is a reflection of the births and migration over the years. How enrollment evolves from this point onward is discussed below.

Figure 1. Enrollment By Grade, 2009



Projection Method

The projections in this report were generated using the cohort survival method. This is the standard method used by people running enrollment projections. For the grades above kindergarten, I compute grade-to-grade growth factors for ten years (see Appendix B). For example, if the number of fifth graders this year is 153 and the number of fourth graders last year was 150, then the growth factor is 1.02. A growth factor above one indicates that students moved in, transferred from non-public schools or that they were retained. A growth factor below one means that students moved out, transferred or were not promoted from the prior grade. For each grade I calculate four different averages: a ten-year median, a 3-year average, a five-year average and a weighted five year average. I choose the average that seems to best fit the data. The average growth factor for a grade is applied to the current enrollment from the prior grade. The projection builds grade by grade and year by year.

In the standard model, kindergarten enrollment is compared to births five years prior and some average of the observed growth or decline is used to project future kindergarten enrollment. My method breaks kindergarten enrollment into three parts: five-year olds, six-year olds entering kindergarten for the first time, and six-year old repeaters. Each component is analyzed separately and then combined to get total projected kindergarten. Kindergarten enrollment is notoriously difficult to predict. I feel that this component model can improve the predictability slightly.

To extend the projection beyond four years, I need to estimate births. The State Department of Public Health has a preliminary count of 92 births in 2008, 16 less than in 2007. To estimate births in 2009, I took advantage of the 0.83 correlation between mid-year births recorded by your town clerk and calendar year births recorded by the state. From 51 births through June 30, 2009, I estimated there will be 106 births in the calendar year. To estimate births in 2010 to 2014, I utilized the Connecticut State Data Center's (CtSDC) projection of children ages 0-4 in 2005, 2010 and 2015. I calculated the projected growth in these intervals, annualized them and applied them to the two year running averages of births in Mansfield in the appropriate years.

In this projection I used in most cases a weighted five-year average of the observed grade-to-grade growth. I give the recent years a higher weight so that the projection responds more quickly to a possible shift in pattern. To estimate kindergarten enrollment, I used the weighted three-year average of retentions, and yields from births five and six years ago to account for the recent change to full-day kindergarten. This policy change also necessitated that I use a three-year average to project Grade 1 enrollment.

The enrollment data were taken from the Public School Information System (PSIS) of the Connecticut State Department of Education. The data may be found on the Bureau of Grants Management section of the State Department of Education website (www.sde.ct.gov/sde). Data from the last two years are subject to change slightly as they are reviewed and edit checks are run. The data exclude special education students placed out of district. The 2009 data were an early extract from the state system and is very slightly different from figures reported to the Mansfield Board of Education.

Total Enrollment

Figure 2 and Table 1 present the observed total enrollment in Mansfield from 1998 to 2009 and projected enrollment through 2019. Detailed grade-by-grade data may be found in Appendix A. Total enrollment in Mansfield decreased from 1,441 to 1,271 students between 1999 and 2009. In that interval there was a loss of 170 students or 11.8 percent. Statewide in that period, grade K-8 enrollment decreased by 4.3 percent. Enrollment growth in similar (DRG C) towns in the region was mixed. Enrollment increased 20.2 percent in Hebron (PK-6 only), 16.8 percent in grades PK-8 in Ellington, 14.7 percent in grades PK-8 in Tolland, 2.5 percent in Pomfret and 1.8 percent in Andover (PK-6 only). Enrollment declined by 14.9 percent in grades PK-8 in Bolton and by 20.5 percent in Columbia.

I anticipate that enrollment will continue to decline at roughly the same rate as the past. Next year, I believe that total enrollment will decrease by 15-20 students or 1.4 percent. At the projection's end in 2019, I forecast that enrollment will be about 1,100 students. The last time enrollment was at this level was 1988. The total 10-year projected decline of 175 students is 13.8 percent below the current enrollment. I have projected that K-8 enrollment statewide will be down 4.6 percent in that period. Your total enrollment should average about 1,160 students over the ten-year projection period. This compares to an average total enrollment of 1,354 students over the past ten years.

The 2008 report projected that 2009 enrollment would be 1,251 students. The actual enrollment of 1,271 was 20 students more than projected. That projection was low by 1.6 percent. Adjusting for the unanticipated growth of the prekindergarten program, the projection was high by eight students or 0.7 percent. The 2008 report projected a low enrollment of 1,206 students in 2016 and a recovery to 1,210 students in 2018. This update projects a low enrollment of 1,096 in 2019. Both reports projected a period of decline. The difference between the two is that the decline is deeper in this updated report, extends longer and instead of a recover, forecasts a leveling off of enrollment.

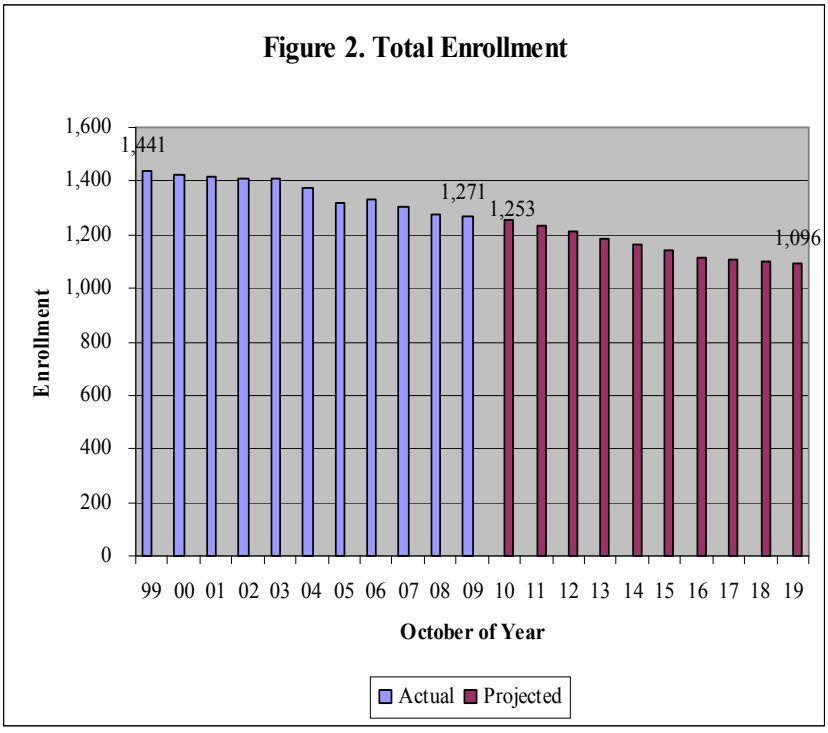


Table 1. Total Enrollment

Year	Students	Percent Change
1999	1441	
2000	1424	-1.2%
2001	1417	-0.5%
2002	1410	-0.5%
2003	1412	0.1%
2004	1376	-2.5%
2005	1315	-4.4%
2006	1333	1.4%
2007	1302	-2.3%
2008	1277	-1.9%
2009	1271	-0.5%
2010	1253	-1.4%
2011	1235	-1.4%
2012	1213	-1.8%
2013	1184	-2.4%
2014	1162	-1.9%
2015	1139	-2.0%
2016	1116	-2.0%
2017	1107	-0.8%
2018	1099	-0.7%
2019	1096	-0.3%

Elementary School Enrollment

Figure 3 and Table 2 present enrollment in grades PK-4. Between 1999 and 2005, combined enrollment at the Dorothy C. Goodwin and Annie F. Vinton schools fell from 791 students to 691 students. By 2009, it had risen slightly to 709 students. Enrollment in 2009 would have fallen if it were not for the expansion of the prekindergarten program. Between 1999 and 2009 elementary school enrollment declined by 822 students or 10.4 percent. State enrollment in grades K-4 fell 7.1 percent in that interval.

I project that next year's elementary school enrollment will be about 20 students less than this year's. By 2019, I expect elementary school enrollment will be about 625 students. This will be 85 students or 12.0 percent below the 2009 figure. Statewide, I have projected a 2.4 percent decrease in grade K-4 enrollment in that period. Over the ten-year projection period, I believe enrollment will average 644 students. This is below the average of 728 students observed over the past ten years.

These figures include pre-kindergarten children. In the past ten years, pre-kindergarten enrollment grew from 53 to 90 children. There was a major expansion of the program in 2009. My projection model holds pre-kindergarten enrollment constant at 90 children. There were nine children enrolled in non-public pre-kindergarten programs in elementary schools in 2008 (the latest data available).

The 2008 report projected that 2009 enrollment in grades K-4 would be 645 students. (I have excluded pre-kindergarten because the expansion in 2009 was not anticipated at the time the 2008 report was issued.) The actual K-8 enrollment of 619 was 26 students less than projected. That projection was high by 4.2 percent. The 2008 report projected that the peak elementary enrollment would be 707 students in 2010. This update estimates that the high will be 688 students in 2010. The 2008 report projected a low enrollment of 671 students in 2012. This update projects a low of 624 students in 2019. The 2008 report had elementary enrollment essentially flat; this 2009 report has it drifting downward. Both the expected high and low are lower in this updated projection.

Figure 3. Elementary Enrollment

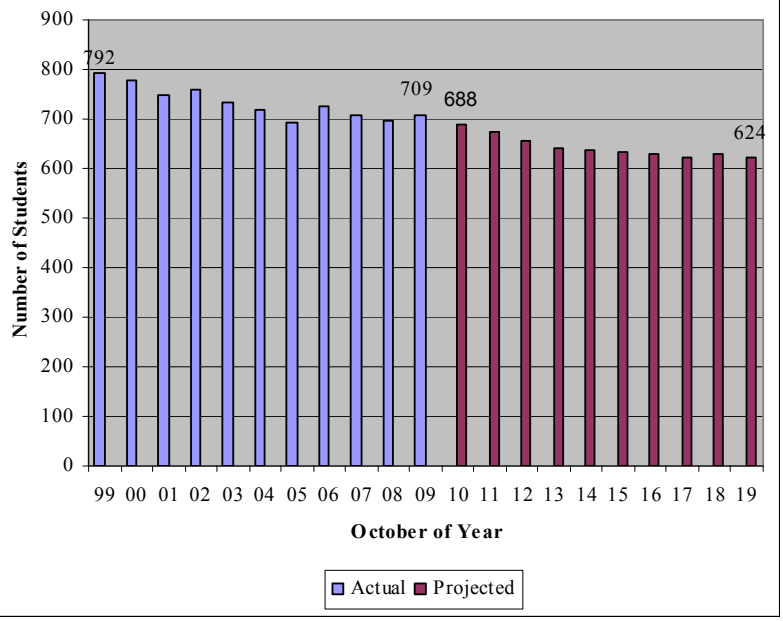


Table 2. Elementary School Enrollment

Year	Students	Percent Change
1999	792	
2000	779	-1.6%
2001	749	-3.9%
2002	761	1.6%
2003	735	-3.4%
2004	718	-2.3%
2005	691	-3.8%
2006	727	5.2%
2007	709	-2.5%
2008	697	-1.7%
2009	709	1.7%
2010	688	-3.0%
2011	673	-2.2%
2012	657	-2.4%
2013	642	-2.3%
2014	638	-0.6%
2015	635	-0.5%
2016	630	-0.8%
2017	622	-1.3%
2018	629	1.1%
2019	624	-0.8%

Middle School Enrollment

Figure 4 and Table 3 present enrollment for the past ten years and ten years of projected enrollment for the Mansfield Middle School. Between 1999 and 2003, middle school enrollment grew from 649 to 677 students. It then began a period of decline that took enrollment to 562 students by 2009. Between 1999 and 2009 enrollment decreased by 87 students or 13.4 percent. Enrollment in grades 5-8 statewide decreased 0.6 percent in that interval.

I believe that the middle school is in for a slow decline in enrollment. I expect that next year's enrollment will be about the same as this year's. I anticipate the bottom of the decline will come in 2018 with an enrollment of 470 students. At the projection's end, I project an enrollment of 472 students. That is 90 students below the current level, a decline of 16.0 percent. I project that enrollment in grades 5-8 statewide will decline by 7.2 percent in that period. Over the ten-year projection period, enrollment at the Mansfield Middle School is expected to average 517 students. This is below the average of 626 students observed over the past ten years.

The 2008 report projected that 2009 enrollment in grades 5-8 would be 586 students. The actual enrollment of 580 was six students less than projected. The 2008 projection was high by 1.0 percent. The 2008 report projected that the middle school enrollment low would be 544 in 2011. This update estimates that the low will be 514 students in 2016. The 2008 report projected an enrollment of 549 students in 2017. This update projects an enrollment of 515 students in that year and 516 in 2019. Both reports projected a period decline followed by a leveling off of enrollment. This 2009 report starts from a lower base and thus has a lower low. This report extends the end decline five years and thus has a shorter period of level enrollment.

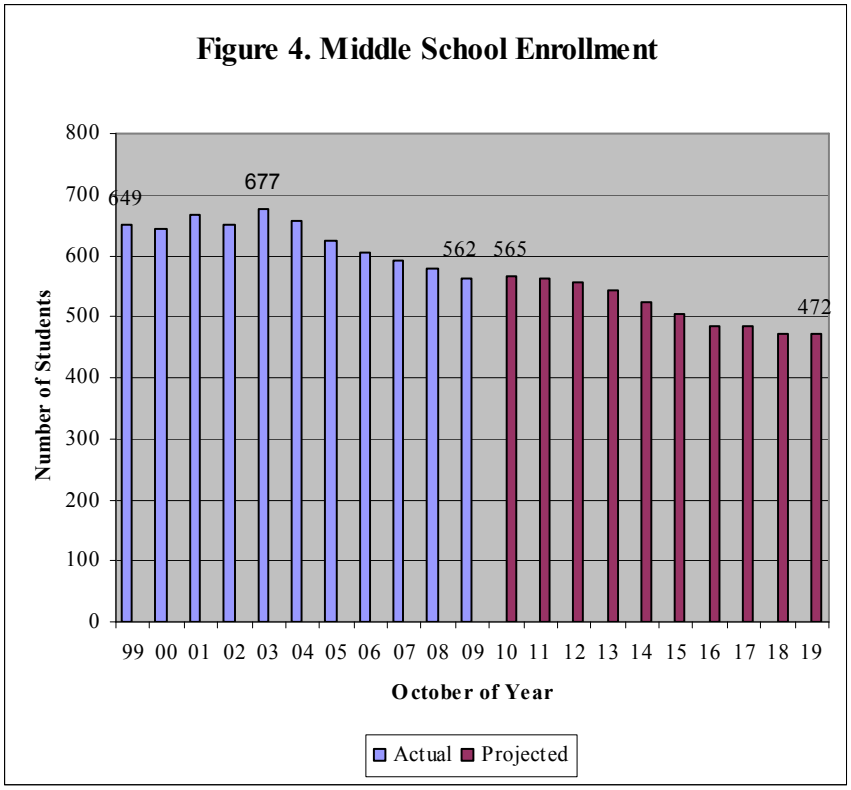
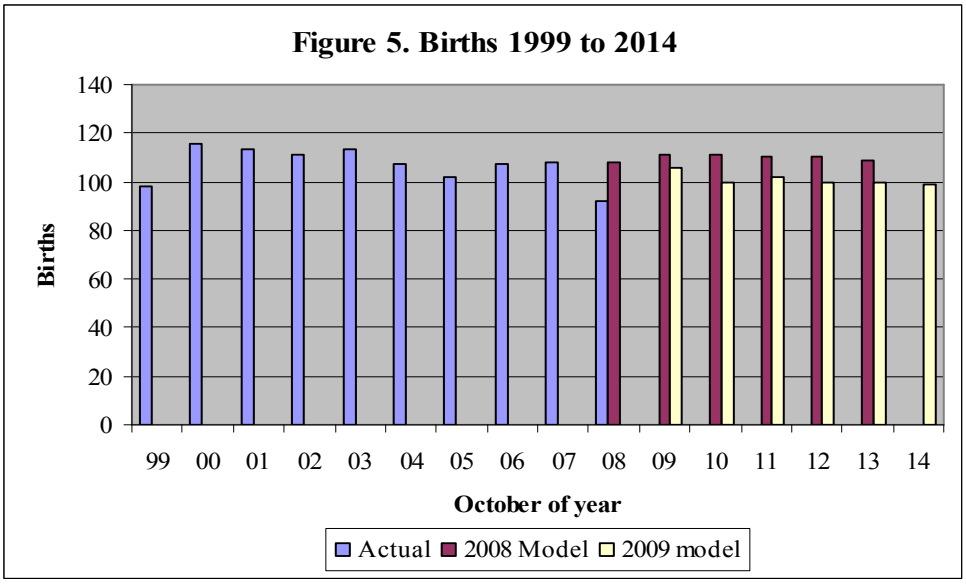


Table 3. Middle School Enrollment

Year	Students	Percent Change
1999	649	
2000	645	-0.6%
2001	668	3.6%
2002	649	-2.8%
2003	677	4.3%
2004	658	-2.8%
2005	624	-5.2%
2006	606	-2.9%
2007	593	-2.1%
2008	580	-2.2%
2009	562	-3.1%
2010	565	0.5%
2011	562	-0.5%
2012	556	-1.1%
2013	542	-2.5%
2014	524	-3.3%
2015	504	-3.8%
2016	486	-3.6%
2017	485	-0.2%
2018	470	-3.1%
2019	472	0.4%

Factors Affecting the 2008 and 2009 Projections

The primary reasons for elementary enrollment change lie in the births and total yield from the birth cohort. In the five years from 2000 to 2004 (this fall's kindergarten through 4th graders) births averaged 112. My data indicate that births in the 2005 through 2009 period will average 103. The projection in years 2015 to 2019 assumes an average of 100 births annually between 2010 and 2014. Figure 5 presents the actual births from 1999 to 2008 and projected births through 2014 under both this year's and last year's projection models. The State Department of Public Health has a preliminary count of 92 births in 2008. I had projected 108 births under the 2008 model. This year I was able to estimate 2009 births from an analysis of the relationship between mid-year births and calendar year births. My new estimate of 106 births is less than the 110 used in the 2008 model. Because of the unexpectedly few number of births in 2008, the new birth estimates are slightly lower than the ones used in the 2008 projection. In the 2009 to 2013 period that the two estimations of births have in common, the 2008 projection averaged 110 births and the 2009 update averaged 109. This change will result in lower projected enrollments starting in 2014.



The slight decline in the estimate of future births was accompanied by a slight decrease in the kindergarten yield from the birth cohort. Figure 6 shows the recent irregular pattern in the total yield from a birth cohort. The yield includes both children who enter kindergarten on schedule five years after birth and children from the same birth year who enter kindergarten as six-year olds for the first time after being held out by their parents (or special education children held in preschool for an extra year). The 2003 birth cohort of 113 babies yielded 104 five-year olds in kindergarten in 2008 and ten six-year olds in 2009. The yield of 100.9 percent means that families with young children moved into Mansfield after giving birth elsewhere. Notice that the yield from the 2004 birth cohort is estimated to be 106 percent, a bit higher than the previous year.

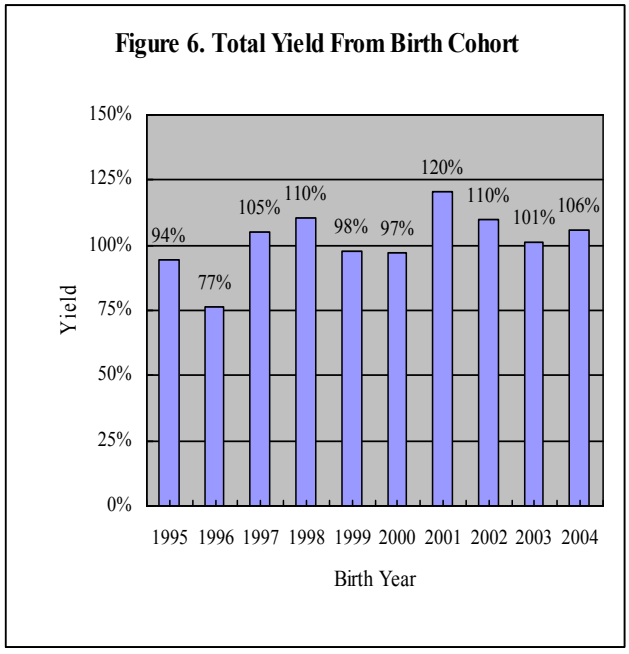


Table 4 gives a history of enrollment in kindergarten since 2000 and relates the components of kindergarten enrollment back to the appropriate birth cohort. Retention is tied to the prior year's kindergarten enrollment. To estimate kindergarten enrollment in this 2009 update, I used the weighted three-year average of retentions, and yields from births five and six years ago because of the recent change to full-day kindergarten. In the 2009 update, I estimated kindergarten from 95.6 percent of births five years ago, 9.3 percent of births six years ago, and 1.9 percent of current kindergarten students retained. In the 2008 projection, I estimated kindergarten from 97.8 percent of births five years ago, 9.6 percent of births six years ago, and 1.8 percent of current kindergarten students retained. The key yield from births five years prior is 2.2 percentage points lower than the yield in the 2008 projection. This will result is a slightly smaller projected kindergarten class. For example, the 2009 kindergarten class was originally projected to have 112 students; it is now updated to have 110 students.

Table 4. Analysis of Kindergarten Enrollment

Year	Birth Year	Births	K	Retained From Prior Year	Non-Retained: Born 5-Years Prior Resident	Non-Retained: Born 5-Years Prior Non-Resident	Non-Retained: Born 6 Years Prior	Percent Retained	Yield From Births 5-Years Prior	Yield From Births 6-Years Prior	Total Yield From Birth Cohort
2000	1995	106	99	1	94	0	4	1.0%	88.7%	2.9%	94.3%
2001	1996	115	87	2	79	0	6	2.0%	68.7%	5.7%	76.5%
2002	1997	112	122	0	113	0	9	0.0%	100.9%	7.8%	105.4%
2003	1998	98	102	2	95	0	5	1.6%	96.9%	4.5%	110.2%
2004	1999	98	97	0	84	0	13	0.0%	85.7%	13.3%	98.0%
2005	2000	116	118	2	104	0	12	2.1%	89.7%	12.2%	97.4%
2006	2001	113	133	1	123	0	9	0.8%	108.8%	7.8%	120.4%
2007	2002	111	127	2	112	0	13	1.5%	100.9%	11.5%	109.9%
2008	2003	113	117	3	104	0	10	2.4%	92.0%	9.0%	100.9%
2009	2004	107	115	2	103	0	10	1.7%	96.3%	8.8%	*105.8%*
3-Year Average								1.9%	96.4%	9.8%	105.5%
Weighted 3-Year Average								**1.9%**	**95.6%**	**9.3%**	**104.8%**
5-Year Average								1.7%	97.5%	9.8%	106.9%
Weighted 5-Year Average								1.8%	97.3%	9.5%	106.7%
Parameters used in 2008 Projection								**1.8%**	**97.8%**	**9.6%**	**107.8%**

Table 5 gives a perspective of the Mansfield's grade-to-grade growth factors. Columns 2 and 3 contain the annual growth rates for the last two years. Columns 4 and 5 contain the growth factors that were used in the 2008 and 2009 projections of enrollment. Both were based in most cases upon a five-year weighted average of annual growth rates. The Grade 1 coefficient was based on a two-year weighted average in the 2008 projection and a three-year weighted average in this 2009 update. Most of Mansfield's growth factors are above 1.000. This indicates in-migration.

Five of the eight grade-to-grade growth rates were lower from 2008 to 2009 than from 2007 to 2008 and three were higher. Grade 5 bears watching. Only once before - between 1985 and 1986 - has this rate been this high. The lower growth rates generally observed between 2008 and 2009 did not carry over fully into the model growth rates where only three of the growth rates decreased, two remained the same and three increased. This is likely due to the dropped 2003 growth rates (they now fall outside of the five-year look-back window) and the weighting of the other years. A comparison of the 2009 model growth rates and the 2008 to 2009 growth finds the model growth rates, which are based on five years of data, higher in five comparisons and lower in three.

Table 5. Change in Grade to Grade Growth Rates

(1)	(2)	(3)	(4)	(5)
Grade	2007 to 2008	2008 to 2009	2008 Model	2009 Model
K to 1	1.016	0.966	1.013	0.974
1 to 2	1.064	1.000	1.026	1.021
2 to 3	1.054	0.985	1.049	1.029
3 to 4	0.960	0.971	0.995	0.984
4 to 5	1.029	1.117	1.004	1.046
5 to 6	0.993	1.036	1.007	1.017
6 to 7	1.015	1.000	1.025	1.021
7 to 8	0.964	1.022	0.992	1.002

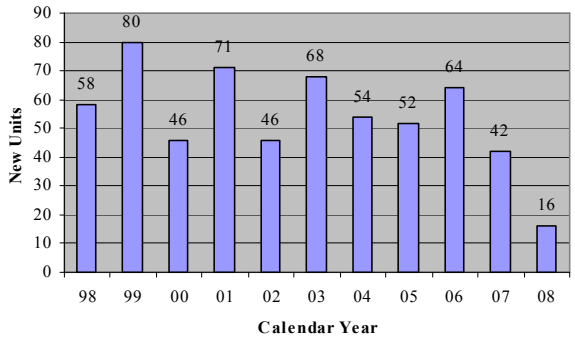
Context of the Projection

The cohort-survival method needs only births and a few years of recent enrollment data to generate a projection. Mathematically, nothing else matters. But enrollment changes do not occur in a vacuum. Events and policies in the district, community and region all have some bearing on enrollment. Remember that a basic assumption of the cohort-survival method is that the recent past can be a good predictor of the near future. It is incumbent for every receiver of a projection to determine what events happened in the past five years and whether they are likely to change. Analyzing how the factors underlying the projection changed in the prior year can be an important step in this process.

To assist in this endeavor, this report examines several factors that could affect enrollment: new home construction, sales of existing homes, non-public enrollment and student migration.

Figure 7 presents the net new housing units constructed from 1998 to 2008. The data come from the State Department of Economic and Community Development. The number of net new units ranged from a high of 80 in 1999 to a low of 16 in 2008. In the five-year look-back period for this projection update, there was an average of 40 net new housing units constructed. In the five-year look-back period for the 2008 projection, there was an average of 53 new housing units constructed annually.

Figure 7. Net New Housing Units



The national and statewide slowdown in new housing construction is also evident in Mansfield. Figure 8 shows the housing permits issued through September 2009. The data are the most currently available from the State Department of Economic and Community Development. From January to September of 2009, there were 16 housing permits issued, compared to 15 through September of 2008. This means that the next few years are likely to be different than the look-back period for the projection. In the near term, at least, enrollment may fall short of the projection.

Figure 8. Housing Permits Issued Through September

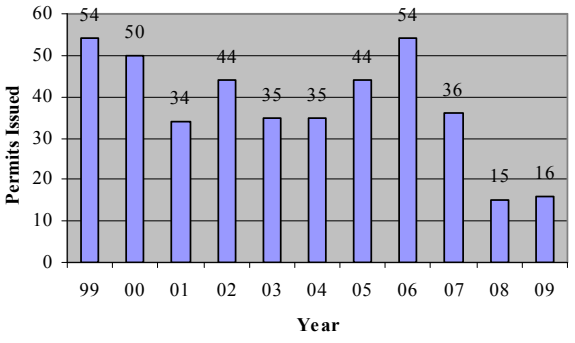


Figure 9 presents my estimate of the number of sales of existing homes. I derived it by taking the number of real estate transactions from The Warren Group/Commercial Record and subtracting the number of new homes constructed. This is an estimate because of the lag between the time a house is constructed and it is sold. The ten-year peak in sales of existing housing occurred in 2004 at 236 houses. Since then sales have fallen. In 2008, I estimate there were 197 sales of existing homes. The 2008 projection assumed 231 sales of existing homes and this 2009 update assumes 213 sales annually. Data on sales through September indicate there likely will be less than 170 sales in 2009.

Figure 10 presents the non-public enrollment (in Connecticut) over the past ten years for students from the town of Mansfield. Non-public enrollment in grades PK-8 ranged from a low of 33 students in 2008 to a high of 53 students in 2001. The 2009 data will not be available until early 2010. The 2008 enrollment represented 2.5 percent of the combined public and non-public enrollment. This is the same percentage observed in 2007.

Figure 11 presents the estimated student migration for the 1999 to 2009 period. It is based on observed enrollment in the Mansfield public schools. In nine of the last 11 years, migration was positive; more students moved into Mansfield than moved out. The migration rate ranged from a low of -2.8 percent in 2005 to a high of 4.7 percent in 2006. The rate was +2.0 percent in 2009. This 2009 update assumes a 1.45 percent average in-migration compared to a 1.09 percent in the 2008 projection.

Neither non-resident enrollment in Mansfield schools nor Mansfield residents enrolled in magnet or charter schools are factors in the enrollment projection.

Figure 9. Sales of Existing Homes

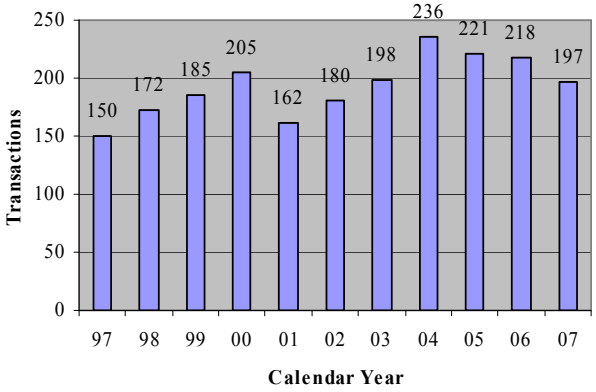


Figure 10. Non-Public School Enrollment

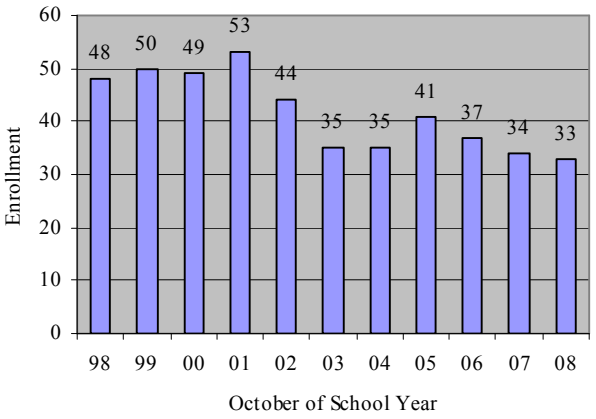
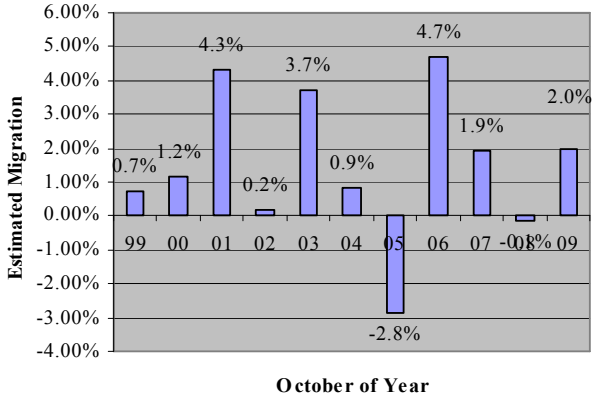


Figure 11. Estimated Student Migration

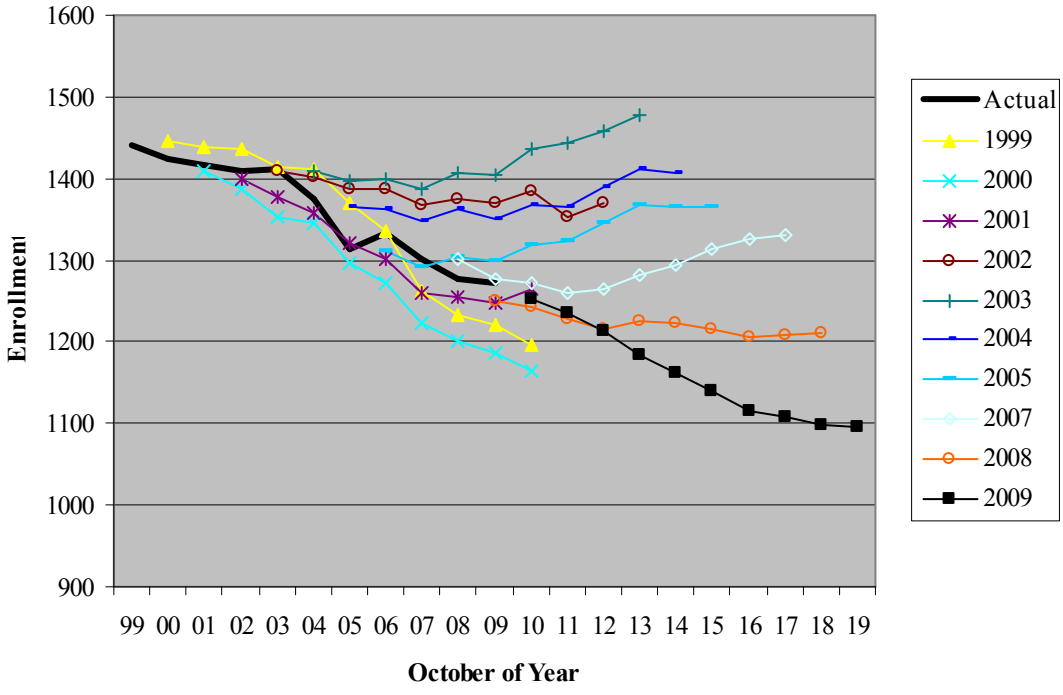


Prior Projections of Enrollment

The cohort-survival projection method works by moving forward the pattern of recent events that are subsumed within the grade-by-grade enrollment. This works very well when communities are stable. That includes places that are growing or declining at a steady rate. One way to know if that assumption is valid is to examine how past projections have fared. Figure 12 presents the enrollment projections that I have run for Mansfield since 1999. Last year's projection was 20 students (1.6 percent) below this year's enrollment of 1,271. If you adjust for the unexpected 27 children increase in pre-kindergarten programs, the projection was high by seven students (0.6 percent). The eight other enrollment projections that I did between 1999 and 2007 had one-year error rates that averaged 1.6 percent. The six projections done between 1999 and 2004 had an average five-year error rate of 4.6 percent, which is 0.9 percent annualized.

In my work I have found the cohort-survival method provides estimates that are sufficiently accurate for intermediate-range policy planning. The eight-year planning horizon for school construction grants is at the limit of the useful accuracy of the method. I analyzed the eight-year accuracy of the district projections I ran in 1999. I found for the 66 district-level projections, the 1999 projections had an average error rate of 7.5 percent in predicting 2008 enrollment. The error was less than five percent in 38 percent of the projections and more than 15 percent in 11 percent of the projections. The projections run in 1999 under-estimated the 2008 enrollments by an average of 1.7 percent.

Figure 12. Prior Projections of Enrollment



Summary

Total enrollment is projected to decline 13.8 percent from 1,271 in 2009 to about 1,110 students in 2019. Elementary enrollment peaked at 792 students in 1999. It is projected to gradually decline over the upcoming ten years, going from 709 in 2009 to between 620 and 630 students in 2019. Enrollment at the Mansfield Middle School peaked at 677 students in 2003. It is projected to decline by 16.0 percent from 562 students in 2009 to between 470 and 480 students in 2019.

The 2009 update is projecting slightly lower enrollments than the 2008 projection in part because the 2009 enrollment came in lower than expected in grades K-4. The projected number of births in this 2009 update is slightly lower than the 2008 projection and the yield from the birth cohort is also very slightly lower. The estimated student migration increased from 1.09 percent in the 2008 projection to 1.45 percent in this 2009 update. Migration was influenced by an unusually large influx in Grade 5. The construction of new houses as well as the sale of existing houses declined.

These projections are based upon several key assumptions revolving around the notion that the recent past is a good predictor of the near future. The projection assumes that the following school policies will continue: kindergarten will remain full-day and retention policies will not change, The projection assumes the following population growth factors will not change appreciable: births will average 100 over the 2009 to 2014 period, a 4.8 percent growth between the number of births and kindergarten enrollment and a student migration of 1.45 percent. Additionally, about nine percent of parents will start their children in kindergarten at age six (or special education children will be held in a pre-kindergarten program for an extra year), there will be 40 new housing units constructed annually and 213 sales of existing homes.

This is an incredibly difficult time to predict future enrollment. A high unemployment rate, recession and mortgage foreclosures all make conditions today different than a couple of years ago. Mansfield's 5.3 percent unemployment rate from January to August of 2009 is the highest since these data were reported by the US Department of Labor starting in 1990. These conditions are only a part of the five-year enrollment history that is used to look forward to the next ten years. We have not yet fully seen how they will impact enrollment. We cannot know today how long these conditions will remain, whether they will increase in severity and when they might end. It is very likely they will impact any enrollment projection made today. Just how they will impact Connecticut enrollment in general or in your town in particular is a matter of speculation. The cohort survival method relies on observed data from the recent past. The method is somewhat unresponsive to change. However, I know of no alternative data-based model that is responsive and produces grade-level data.

This projection should be used as a starting point for local planning. Examine the factors and assumptions underlying the method. You know your community best. Apply your knowledge of the specific conditions in Mansfield and then make adjustments as necessary.

Appendix A. Enrollment Projected By Grade to 2019

School Year	Birth Year	Births[1]	K[2]	1[3]	2	3	4	5	6	7	8	PreK	PK-4	5-8	Total
1999-00	1994	136	105	172	154	165	143	164	160	167	158	53	792	649	1441
2000-01	1995	106	99	134	163	145	174	137	164	171	173	64	779	645	1424
2001-02	1996	115	87	132	136	168	159	177	153	163	175	67	749	668	1417
2002-03	1997	112	122	126	145	138	171	159	172	156	162	59	761	649	1410
2003-04	1998	98	102	143	124	156	143	172	168	176	161	67	735	677	1412
2004-05	1999	98	97	123	143	128	161	141	173	171	173	66	718	658	1376
2005-06	2000	116	118	121	119	139	128	151	139	171	163	66	691	624	1315
2006-07	2001	113	133	127	124	137	145	133	156	144	173	61	727	606	1333
2007-08	2002	111	127	125	129	125	136	144	135	166	148	67	709	593	1302
2008-09	2003	113	116	129	133	136	120	140	143	137	160	63	697	580	1277
2009-10	2004	107	115	112	129	131	132	134	145	143	140	90	709	562	1271
Projected															
2010-11	2005	102	110	112	114	133	129	138	136	148	143	90	688	565	1253
2011-12	2006	107	114	107	114	117	131	135	140	139	148	90	673	562	1235
2012-13	2007	108	115	111	109	117	115	137	137	143	139	90	657	556	1213
2013-14	2008	92	100	112	113	112	115	120	139	140	143	90	642	542	1184
2014-15	2009	106	111	97	114	116	110	120	122	142	140	90	638	524	1162
2015-16	2010	100	107	108	99	117	114	115	122	125	142	90	635	504	1139
2016-17	2011	102	109	104	110	102	115	119	117	125	125	90	630	486	1116
2017-18	2012	100	107	106	106	113	100	120	121	119	125	90	622	485	1107
2018-19	2013	100	107	104	108	109	111	105	122	124	119	90	629	470	1099
2019-20	2014	99	106	104	106	111	107	116	107	125	124	90	624	472	1096

[1] Births 1994 to 2008 are from the State Department of Public Health. The 2008 figure is preliminary.
Births in 2009 were estimated from mid-year data provided by the town clerk.
Births in 2010 to 2014 were estimated from the growth in the Connecticut State Data Center projection of children ages 0-4.

[2] Based on three-year weighted averages of births 5- and 6-years ago and retention.

[3] Based on three-year average.

Appendix B. Growth from Grade to Grade across Years

	Grade Moved Into from Prior Year											
October of Year	**K**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**PreK**	**Average**	**Estimated Migration**
2000	0.934	1.276	0.948	0.942	1.055	0.958	1.000	1.069	1.036		1.024	1.15%
2001	0.757	1.333	1.015	1.031	1.097	1.017	1.117	0.994	1.023		1.043	4.30%
2002	1.089	1.448	1.098	1.015	1.018	1.000	0.972	1.020	0.994		1.073	0.21%
2003	1.041	1.172	0.984	1.076	1.036	1.006	1.057	1.023	1.032		1.047	3.72%
2004	0.990	1.206	1.000	1.032	1.032	0.986	1.006	1.018	0.983		1.028	0.85%
2005	1.017	1.247	0.967	0.972	1.000	0.938	0.986	0.988	0.953		1.008	-2.84%
2006	1.177	1.076	1.025	1.151	1.043	1.039	1.033	1.036	1.012		1.066	4.72%
2007	1.144	0.940	1.016	1.008	0.993	0.993	1.015	1.064	1.028		1.022	1.91%
2008	1.027	1.016	1.064	1.054	0.960	1.029	0.993	1.015	0.964		1.014	-0.12%
2009	1.075	0.966	1.000	0.985	0.971	1.117	1.036	1.000	1.022		1.019	1.98%
5 Year Ave.	1.088	1.049	1.014	1.034	0.993	1.023	1.013	1.021	0.996		1.026	
3 Year Ave.	1.082	0.974	1.027	1.016	0.974	1.046	1.015	1.026	1.005		1.018	
Weighted 5 year	1.086	1.007	1.021	1.029	0.984	1.046	1.017	1.021	1.002		1.024	
Median, past 10 years	1.034	1.189	1.007	1.023	1.025	1.003	1.010	1.019	1.017		1.036	
Enrollment Multiplier		0.974	1.021	1.029	0.984	1.046	1.017	1.021	1.002	1.000	1.012	